

Amendments to the Specification:

Please replace the paragraph beginning at page 3, line 18, with the following rewritten paragraph:

Also, another composite-type mixed oxygen ion and electronic conductor of the present invention is characterized in that it comprises praseodymium-doped cerium oxide(Composition formula: $Ce_{1-x}Pr_xO_{2-x/2}$, where $0 < x < 0.5$) as oxygen ion conductive phase, and spinel-type ferrite (composition formula: MFe_2O_4 , where M=Mn, Fe, Co, Ni) as electronic conductive phase.

Please replace the paragraph beginning at page 11, line 3, with the following rewritten paragraph:

[0024] Fig.6 is a graph showing oxygen permeation coefficient of the composite-type mixed oxygen ion and electronic conductor of the present invention. The oxygen permeation coefficient used here is the value obtained by multiplying the oxygen permeation flux density with the sample thickness L, and one of the index of permeability not dependent on the film thickness. The measured samples were $(Ce_{0.8}Gd_{0.2})O_2$ ($Ce_{0.8}Gd_{0.2}O_{1.9}$ – 15vol% $MnFe_2O_4$) and $(Ce_{0.8}Gd_{0.2})O_2$ ($Ce_{0.8}Pr_{0.2}O_{1.9}$ – 15vol% $MnFe_2O_4$). In the figure, the ordinate shows the oxygen permeation coefficient, and the abscissa shows the temperature. □ shows the oxygen permeation coefficient of $(Ce_{0.8}Gd_{0.2})O_2$ ($Ce_{0.8}Gd_{0.2}O_{1.9}$ – 15vol% $MnFe_2O_4$), and ○ shows the oxygen permeation coefficient of $(Ce_{0.8}Pr_{0.2})O_2$ ($Ce_{0.8}Pr_{0.2}O_{1.9}$ – 15Mn Fe_2O_4).